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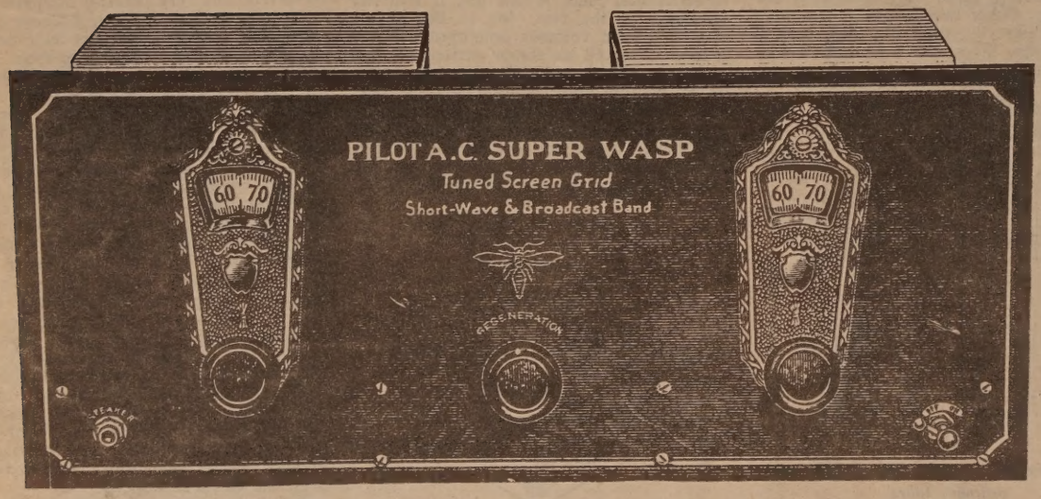
THE HORN SPEAKER

The first and the standard monthly publication for radio collectors since 1972

The Pilot
A.C. SUPER-WASP

The First Short-Wave Receiver that Works Successfully on Alternating Current; Additional Features are Tuned Screen-Grid Stage, Double Shielding and 14-500 Meter Wavelength Range

by DAVID GRIMES



Front panel view of a completed A.C. Super-Wasp.

THE usual procedure in describing a new circuit is to delve at once into the various peculiar ramifications of that particular hook-up. We have decided to adopt a slightly different method of approach for the A.C. Super-Wasp, because the laboratory development of this unique arrangement has been most romantic. More than half the interest of the story would be lost if we were to confine ourselves solely to the technical description, without taking you with us over the path of progress which was so persistently pursued for almost a year. Accordingly, our narrative starts with the successful completion of the battery-operated Super-Wasp; for no sooner was this task accomplished than the laboratory facilities were concentrated on its complete electrification on A.C. circuits.

Now in view of the satisfactory electrification of other types of receivers, the problem confronting us seemed rather simple. It didn't take very long, however, to completely disillusion us on this point. The A.C. operation of broadcast sets was an entirely different proposition than that presented by the multi-range Super-Wasp. It was one thing to design a receiver that was commercially humless in loud speaker performance and quite another to find a circuit combination that would permit the use of telephone receivers.

WAVELENGTH DIFFICULTIES

Then, again, a few circuit experiences were sufficient for quelling the hum in any one receiving band; but the difficulties of the problem were considerably multiplied by the necessity for the Super-Wasp to properly perform over a multiplicity of wavelengths. Circuit combinations that were absolutely noiseless on the broadcast range were impossible on the shorter waves. And last, but not least, the regenerative detector of the Super-Wasp added a particularly knotty problem, as hums that were not noticeable on straight detection became veritable Niagaras when the regeneration control was brought near the sensitive point.

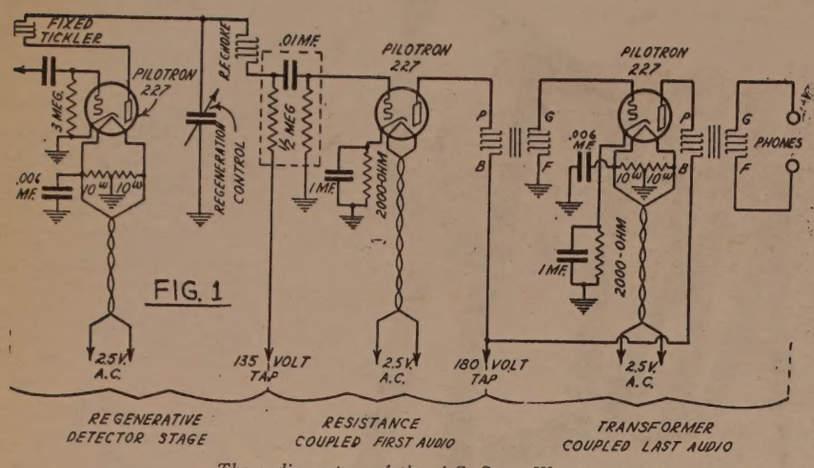
So you see, the job we had cut out before us was a mean one and well destined to consume the year that was finally devoted to it. Well, naturally our first consideration was to see what troublesome requirements of the Super-Wasp could be eliminated; thus placing the set in the category of solvable circuits. Could the headphone operation be relegated to the discard and could we insist solely on loud speaker hook-ups? We just placed ourselves in the position of the short-wave fan and tried operating the battery Super-Wasp for a few nights on loud speaker only. It was emphatically decided that earphones were a necessity as far as the rest of the household was concerned. We enjoyed the loud speaker but the family did not! Telephone receiver operation must be retained and the hum level reduced accordingly.

A DETERMINATION

Next, we certainly could not confine the performance of the set to one set wave band. One of the real features of the Super-Wasp was its efficient operation on all of the accepted channels. No! The hum must be conquered on each and every group of tuning coils at present used in the receiver. And as regards the third predicament, it would be useless to consider the set at all if it could not be made to regenerate, for CW reception would be impossible without that feature. Hence the hum must be positively eradicated on any regenerating action. Our requirements are clear cut enough! There is no mistaking to be done. We must produce the first successful A.C. regenerative, short wave, headphone receiver in existence!

Well, let's get into our story. We found that there were in general two classes of "hums". The first class was what we termed a "residual hum" because it could be heard in the headphones at all positions of the tuning dials. It was arising from the audio circuit. The second class was what we choose to term "tunable hums". This latter class was very numerous and could be brought in on several places on all of the coils. All of these could be tuned in or out by operating the tuning dials. They appeared to have definite wave lengths.

We set about to eliminate the residual hum as a starter. It was fairly easy to trace it right down to the detector tube. It was a pure question of 60 cycle induction caused by the construction of the tube itself. It was also present in the two audio tubes, but the succeeding amplification was, of course, not as great as the total following the detector. Hence it was not as noticeable from these latter sources. Anyway, a study of the design of the tube was started. Meanwhile, during the progress of this tube study, a re-design of the entire audio circuit was undertaken. It was obvious that too much audio gain was undesirable for other reasons than A.C. hum amplification. Microphonic detector noises are always an annoyance resulting from excessive audio amplification. Incidentally, two stages of transformer coupled audio amplification are not as good for tone quality as more recent combinations of resistance and transformer coupling.



The audio system of the A.C. Super-Wasp.

TONE QUALITY

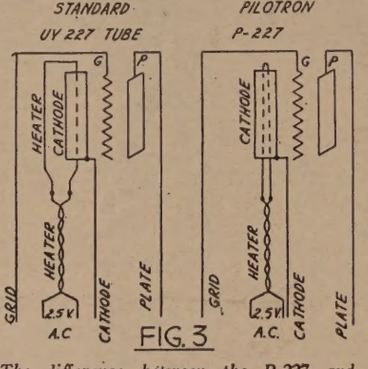
It was felt that with the ever increasing number of short wave broadcasting stations, the question of good tone quality would shortly become a paramount issue. Consequently, we took the bull by the horns and incorporated a modern audio amplifying system. This is illustrated in Figure 1. It consists of a detector working directly into a high resistance-high capacity coupling unit, onto the grid of the first audio tube. This audio stage is then coupled to the last audio tube thru a standard transformer with the primary phase arranged for negative howl tendency. A tube with the standard electrical amplification characteristics of the 227 is used in all three positions. Other features of this tube are entirely different, as will be subsequently shown. The use of this first resistance stage reduced the residual hum much more than the reduction in audio amplification explained. It was found that a net gain in hum reduction resulted from the use of the resistance coupling in the first stage. The resistance units did not act like A.C. pick up coils, as did the transformer windings in this location.

You may wonder why, in our effort to obtain good tone quality, we did not employ a power tube in the last audio stage. The 227 type was deliberately retained. You see, power tubes are operated on raw A.C. filaments. This is quite all right on loud speaker sets, but if you want to know just how much hum is really present with such a tube, **listen to the output of a standard broadcast set with a pair of phones. If we are to use phones on this short wave set of ours, we simply cannot tolerate a raw A.C. filament tube, even in the last stage. Hence it is ruled out. Furthermore, by installing an output transformer in the plate of this tube to connect it to the reproducing unit, the impedances may be approximately matched so that the tone quality is not particularly compromised in spite of this 227 type in the last stage.**

TUBE TROUBLES

Our tube research laboratory by this time had a report ready for us. The substance of this report is shown in Figure 3. It developed that the hum was caused by an unbalanced field created by the filament. The standard 227 tube has a straight filament run thru the center of the heated cathode. It is apparent that at one instant the bottom of the filament will be positive while the top is negative, shortly followed by a reversal of the heating current which makes the bottom of the filament negative with the top positive. The electronic field within the cathode is thus rapidly twisted back and forth during each alternation of the heating current. A noticeable hum results. Now the construction shown in the Pilotron 227 is purposely designed to avoid this very thing. The heating filament is doubled back on itself within the cathode cylinder after the fashion of a hairpin. In this arrangement, the electronic field is neutralized at every point and no upheavals take place on the reversals of the heating current. The Pilotron 227 is a very quiet tube and has been specially designed for the A.C. Super-Wasp for use in the detector and audio stages.

Two other things also contributed to the total amount of hum which were entirely separate and distinct from the hairpin filament assembly. There have been and are several makes of special tubes which employ the doubled filament mounting, but the results from these were somewhat disappointing. Other hum sources there were that were annoying even tho they were of less intensity. These were found to be located in an insulating sleeve that was incorporated to hold the filament in place and in the amount of residual gas still remaining in the tube. The P-227 Pilotron was accordingly built with a high degree of vacuum and the insulating sleeve was omitted. Correct mounting of the elements makes this sleeve unnecessary anyway.



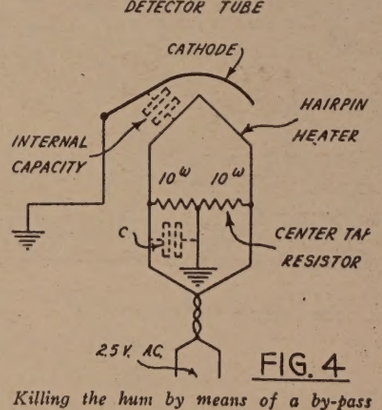
The difference between the P-227 and ordinary tubes.

TUNABLE HUMS

The above precautions killed the A.C. residual hum or, at least, reduced it to a negligible minimum. The tunable hums next came under surveillance and these were the most exasperating puzzles. But, like most complicated problems, they were confusing only because they were resulting from many different causes. Each hum and its cause was finally found to be a very simple function, and the remedy in each case has been as simple. To confine ourselves to the problem at hand, we studied the hums with the antenna entirely disconnected from the set. This removed some of the disturbances which were coming in from the ether. This class of disturbance, and sometimes hum, is beyond our power to solve. Such effects would be as noticeable on any other type of set. These hums must not be confused with those arising in the set. *If there is ever any doubt in your mind as to the source of a hum, merely remove the antenna. Its marked reduction or disappearance will prove it to be of external origin, falling within the incurable class.*

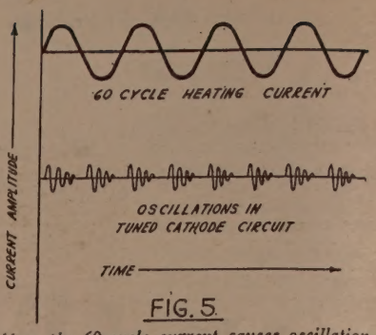
But by far the greater number of our hums continued to persist, even after we had removed the antenna. These obviously existed in the receiver itself and, as such, fell under the curable classification. Those on the red and orange coils, within the wavelength bands of 14 to 50 meters, were the strongest. They must have arisen from some high frequency oscillation in the set modulated by the 60 cycle current. Some combination of inductance and capacity was acting as a transmitting circuit. This was finally found to be actually true. One of these circuits is shown in Figure 4. The capacity of the oscillating system is the internal capacity of the cathode-heater combination. The inductance is that of the leads combined with that of the center-tapped resistance. This resistance unit actually has enough inductance to be troublesome at the very short waves. The cure consists in merely adding a capacity across one side of this center-tapped "inductance" so as to kill the resonant combination.

There were two of these cathode-heater oscillating circuits. One was in the last audio tube and the other was in the detector. The latter seems reasonable enough, but one would never think to look at the last audio tube as a possible source of short-wave radio-frequency disturbance. Nevertheless, there it was and it was the strongest of the two, due to the higher plate and grid voltages employed. These apparently acted as shock exciters of the oscillatory circuits—the shocks taking place on every half wave of the 60 cycle current. This effect is shown in Figure 5. A casual glance at the audio circuit of the A.C. Super-Wasp will reveal these .006 mf. by-passing condenser across the mid-tap resistors in both the detector and last audio



Killing the hum by means of a by-pass condenser, C.

circuits. Of course, removing these center-tapped resistors entirely will open up these oscillating circuits and the hums on the lower wave length coils will cease. In fact, it was this that first led to their discovery. But, removing the resistors only cures one trouble to bring in another. The residual hum greatly increases in the straight audio system when these center-tapped grounds are removed. They must remain and the high frequency oscillation must be killed by the by-passing method.



How the 60-cycle current causes oscillation.

USING R.F. CHOKES

With these two culprits put away, there still remained other sources of hums, the latter occurring on the higher wave length coils, up in the green and blue range. These were obviously caused by similar circuits except with higher inductances and capacities, so that the wavelengths were longer. As a further clue to their cause, they did not occur until the plate and grid connections were made for the screen grid tube. They existed in these leads and were obviated by the insertion of the .2 mf. by-passing condensers and the small chokes. The chokes are commercial, cylindrically wound, resistors; but their main function in the plate and screen grid leads is a choking one. They are indicated on the sketches as 450 ohm resistors. These are shown in Figure 6.

There is one other point of special mention that should not be overlooked. Many of you are already familiar with the "squawking" of the ordinary regenerative receiver at the very point of oscillation. It is most annoying, not only because of the racket, but because that particular point is the one at which signals are most likely to be heard. This was given considerable attention in the A.C. design and, as a result, it has been completely subdued. The high resistance in the plate circuit of the detector accounts for this. **There appears to be a highly critical condition existing in the grid circuit at the starting point of oscillation. Just as the grid tends to change from the slight positive bias, which it normally has, to the negative value which the rectification gives it, it undergoes an oscillatory condition which causes a bad "squawk" when the plate voltage is fed thru a transformer. But when the plate potential is supplied thru a high resistance, such as the .5 megohm shown in Figure 2, the effective plate voltage drops when this condition occurs and this decline immediately stops the oscillation or "squawk". The result is that the new A.C. Super-Wasp goes into R.F. oscillation in a very smooth manner, permitting perfect regeneration on even the weakest stations.**

Figure 7 gives the overall circuit layout of the complete set, including the Pilot K-111 "A" and "B" pack. This is shown intact because it is quite necessary to operate the receiver on a given "B" eliminator to insure the proper plate voltages. The success or failure, particularly of a regenerative receiver, depends largely on the correct plate potentials. For instance, too much voltage on the detector will make the oscillation uncontrollable, while too little will stop it altogether. The taps have been worked out so that no audio or radio feedback is present in the eliminator. Any other combination may cause trouble.

No stress has been placed on the rest of the A.C. circuit, as the connections are en-

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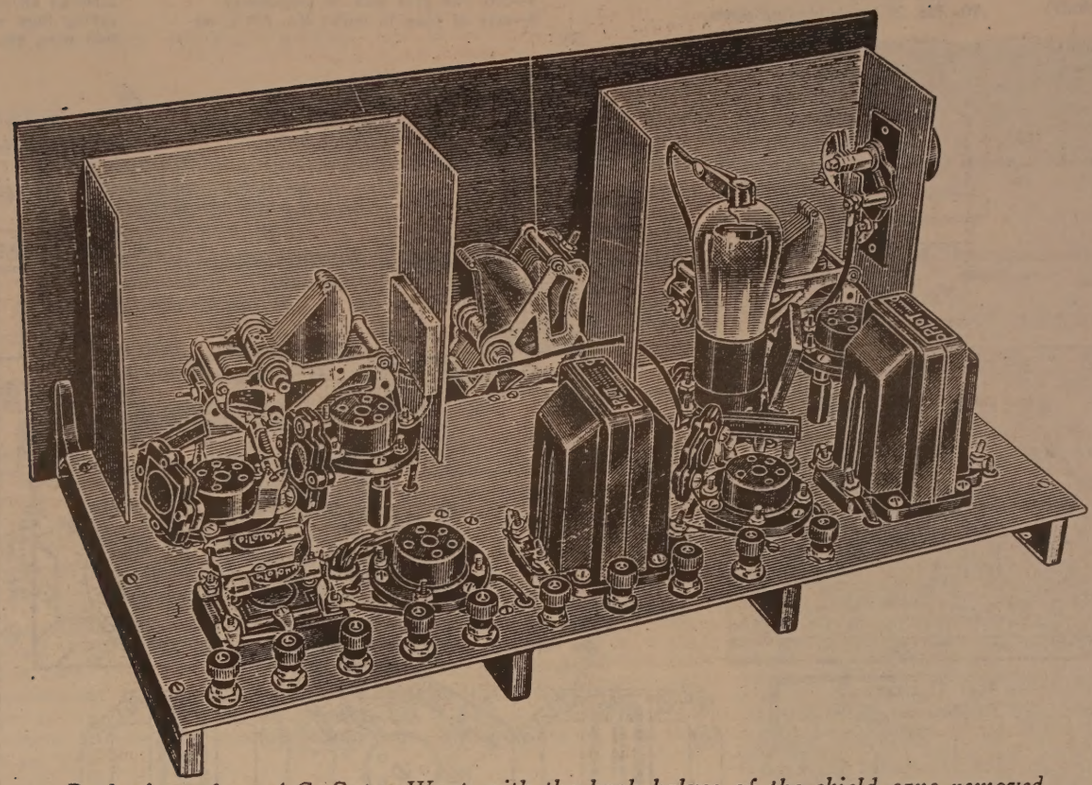
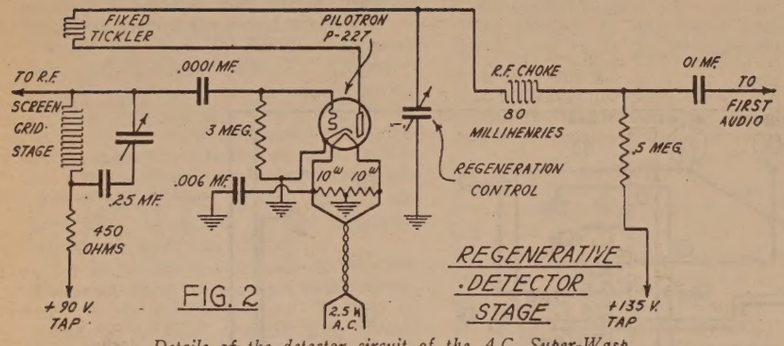


Back view of an A.C. Super-Wasp with the back halves of the shield cans removed.



Details of the detector circuit of the A.C. Super-Wasp.

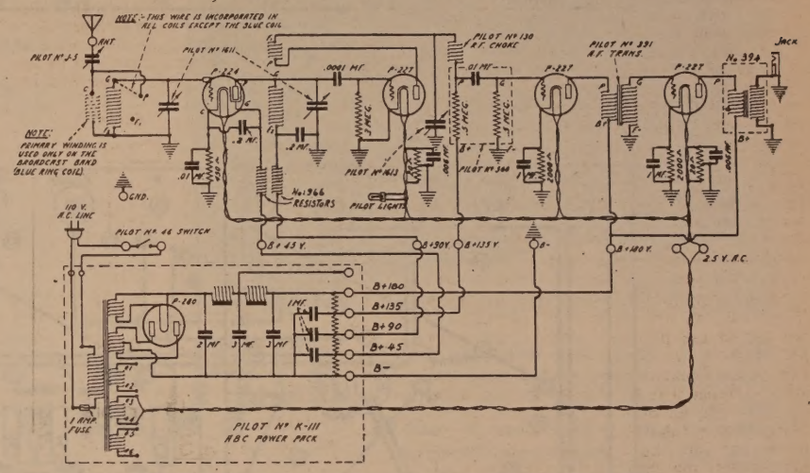
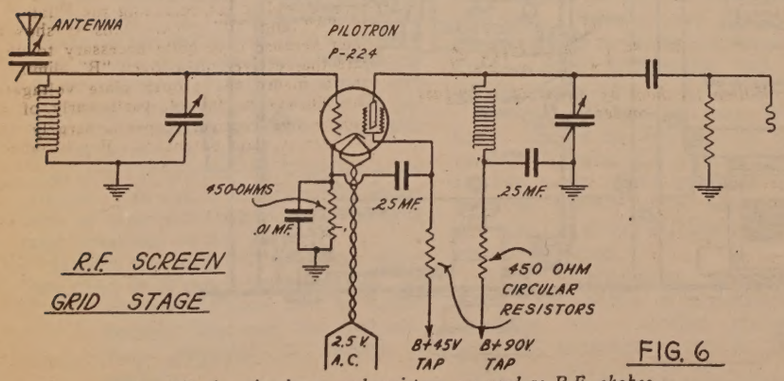


Fig. 7: The complete wiring diagram of the A.C. Super-Wasp.



How 450-ohm circular wound resistors are used as R.F. chokes.

tirely conventional. There is nothing unusual in the methods for obtaining "C" bias by means of a voltage drop in the minus "B" lead to each tube where the bias is required. The resistance is by-passed by a large condenser so that no fluctuating feed-back will occur. Sometimes a common bias can be employed by two tubes which operate under like conditions, such as the two audio stages shown in the diagram. This has not been found feasible for this circuit and is not recommended.

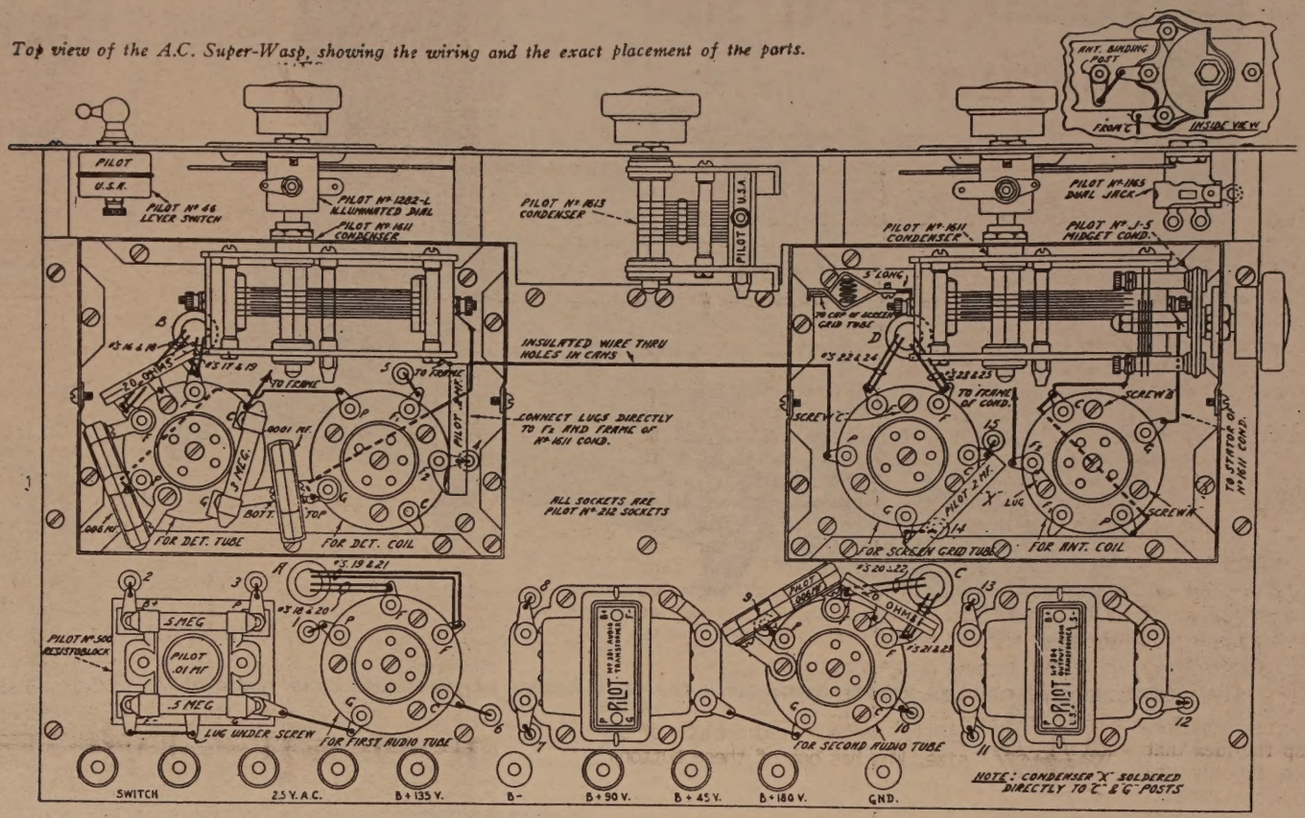
Like its famous predecessor, the A.C. "Super-Wasp" is marketed in kit form, all the necessary parts being supplied. The front panel and the sub-panel are drilled with all the holes, so the constructor need only tighten up several dozen small nuts and bolts to assemble the kit into a working radio receiver.

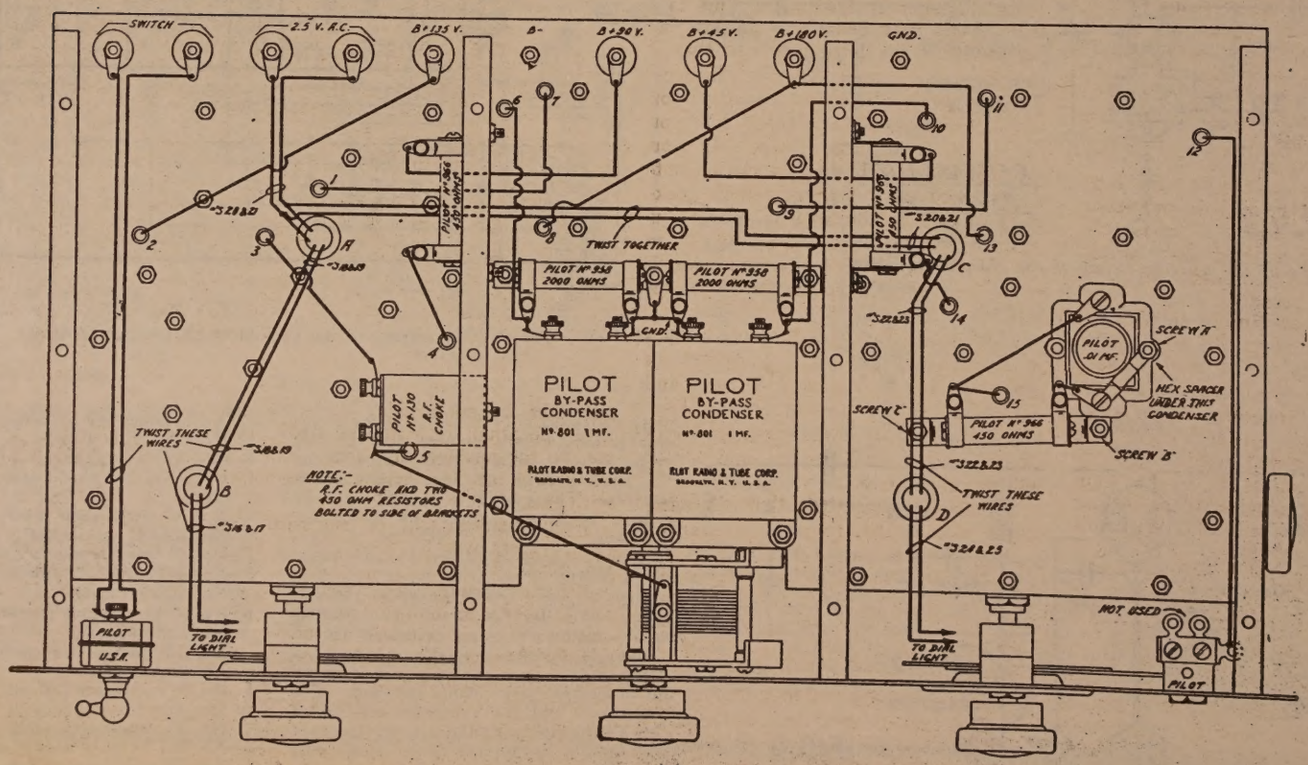
The kit includes the following parts:

1—No. 699 Front panel
1—No. 698 Sub-panel
1 pair—No. 600 shield cans, with covers
4—No. 37 metal shelf brackets
2—No. 1282-L vernier dials
1—No. 46 lever type snap switch
2—No. 1611 variable condensers (with No. 1259W knobs)
1—No. 1613 variable condenser (with No. 1259W knob)
1—No. J-5 midget condenser (with No. 1259W knob)
1—No. 59 condenser (.01 mf.)
1—No. 50B fixed condenser (.0001 mf.)
2—No. 58 condensers (.006 mf.)
2—No. 801 by-pass condensers (1. mf.)
2—No. 805 condensers (.2 mf.)
1—No. 500 Resistoblock

1—No. 391 audio transformer
1—No. 395 output transformer
1—No. 130 R.F. choke coil
3—No. 966 resistances (450 ohms)
2—No. 958 resistances (200 ohms)
2—No. 354 center-tapped resistances (20 ohms)
10—No. 29 blank binding posts
1—No. 20 "ANT" binding post
2—No. 752 grid leaks (.5 megohm)
1—No. 758 grid leak (3 megohms)
2—sets of plug in coils; No. 601A, antenna coils; 601D, detector coils
1—No. 697 Hardware package. which includes all nuts, bolts, washers, soldering lugs, special fixtures, connection wire, etc.

Top view of the A.C. Super-Wasp, showing the wiring and the exact placement of the parts.





Bottom view, showing the resistors and the condensers and the connections to them.

MODERN ELECTRICS 343

Wireless Association of America

Under the Auspices of "Modern Electrics"

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The Wireless Association of America has been founded with the sole object of furthering the interests of wireless telegraphy and aerophony in America.

We are now on the threshold of the wireless era, and just beginning to rub our intellectual eyes, as it were. Sometimes we look over the wall of our barred knowledge in amazement, wondering what lays beyond the wall, as yet covered with a dense haze.

However, young America, up to the occasion, is wide awake as usual.

Foreign wireless experts, invariably exclaim in wonder when viewing the photographs appearing each month in the "Wireless Contest" of this magazine. They cannot grasp the idea that boys 14 years old actually operate wireless stations successfully every day in the year under all conditions, but they are all of the undivided opinion that Young America leads the rest of the world wirelessly.

Even Dr. Lee de Forest, America's foremost wireless authority, confessed himself surprised that so many young men in this country should be in the possession of such well constructed and well managed wireless stations, which is only another proof that the clear headed young men of this country are unusually advanced in the youngest branch of electrical science.

So far America has lead in the race. The next thing is to stay in the front, and let the others follow. In fact he would be a bold prophet who would even dare hint at the wonders to come during the next decade.

The boy experimenting in an attic today may be an authority to-morrow. However, not even the cleverest inventors or experimenters always have the opportunity of making themselves known to the world, and it is right here that we are confronted with a mystery so far unsolved. Out of 100 per cent of young wireless experimenters, 90 per cent. are extremely bashful. Why this should be so is a mystery.

As stated before the new Wireless Association's sole aim is to further the interests of experimental wireless telegraphy and aerophony in this country.

Headed by America's foremost wireless men, it is not a money-making institution. There are no membership fees, and no contributions required to become a member.

There are two conditions only. Each member of the Association *must be an American citizen* and MUST OWN A WIRELESS STATION, either for sending or for receiving or both.

The Association furnishes a membership button as per our illustration. This button is sold at actual cost and will be mailed to each member on receipt or 15 cents (no stamps nor checks).

This button is made of bronze, triple silver-plated. The flashes from the wireless pole are laid in in hard red enamel, which makes the button quite distinctive. The button furthermore has the usual screw back making it easy to fasten to buttonhole. The lettering itself is laid in in black hard enamel. Size exactly as cut.

On account of the heavy plating it will last for years and is guaranteed not to wear "brassy."

Its diameter is 3/4 inch. This is a trifle larger than usual, the purpose being to show the button off so that it can be readily seen from a distance. The reason is obvious. Suppose you are a wireless experimenter and you live in a fairly large town. If you see a stranger with the Association button, you, of course, would not be backward talking to the wearer and in this manner become acquainted with those having a common object in mind, which is the successful development of "wireless."

The Association furthermore wishes to be of assistance to experimenters and inventors of wireless appliances and apparatus, if the owners are not capable to market or work out their inventions. Such information and advice will be given free.

Somebody suggested that Wireless Clubs should be formed in various towns, and while this idea is of course feasible in the larger towns, it is fallacious in smaller towns where at best only two or three wireless experimenters can be found.

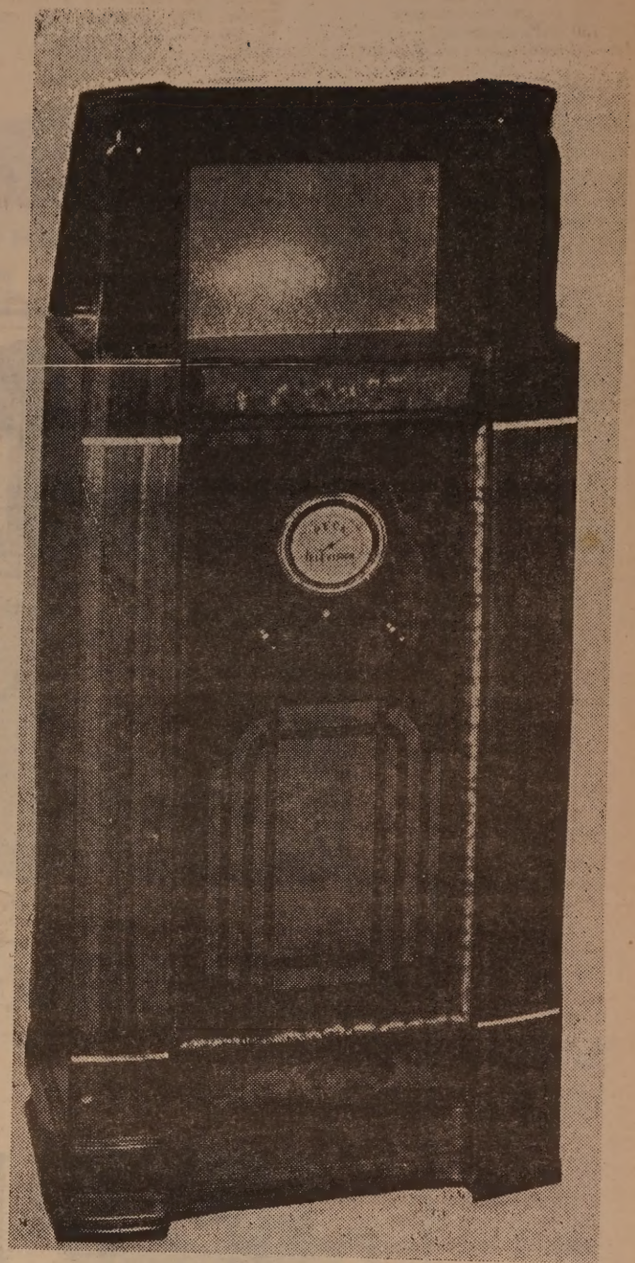
Most experimenters would rather spend their money in maintaining and enlarging their wireless stations, instead of contributing fees to maintain clubs or meeting rooms, etc., etc.

The Board of Directors of this Association earnestly request every wireless experimenter and owner of a station to apply for membership in the Association by submitting his name, address, location, instruments used, etc., etc., to the business manager. There is no charge or fee whatever connected with this.

Each member will be recorded and all members will be classified by town and State.

After February 1st, 1909, members are at liberty to inquire from the Association if other wireless experimenters within their locality have registered. Such information will be furnished free if stamped return envelope is forwarded with inquiry.

As far as I can tell this is the earlist amateur radio club of any size. Who has one of these buttons?



PECK

If you have this fine old 1935 television set in your collection, please let us know. With the top down it looks like a regular radio with only the words on the dial telling that is a TV set.

CLASSIFIED AD DEADLINE

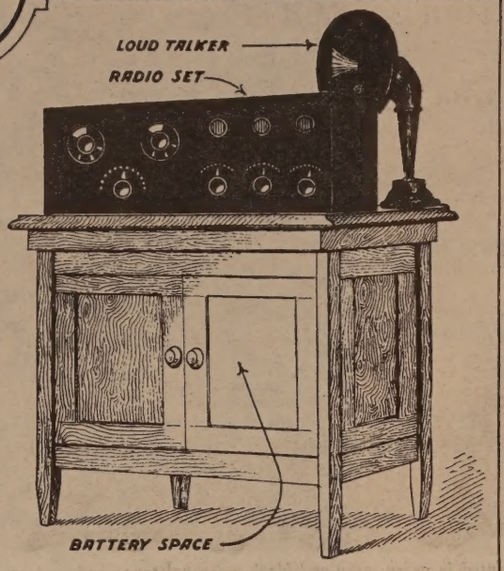
January 22th

CLASSIFIED ADS ARE FREE UP TO 100 WORDS

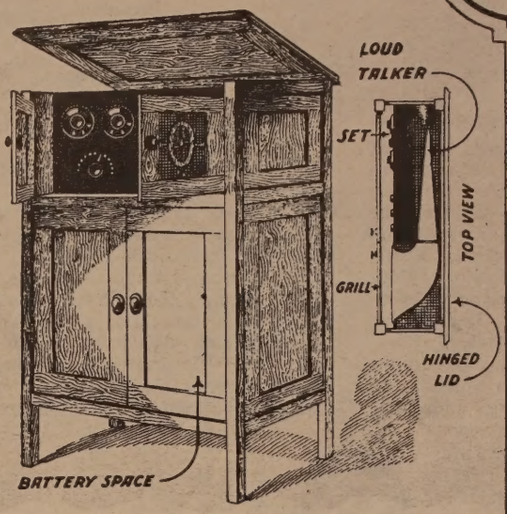
Styles of Radio Cabinets

Types of Construction That Prove Efficient

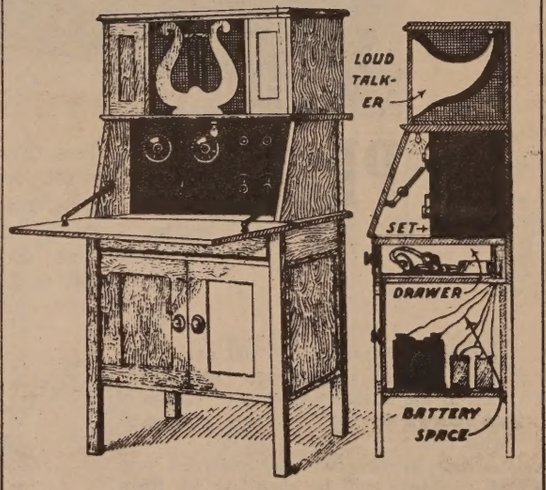
BY WILLIAM BUTTERFIELD



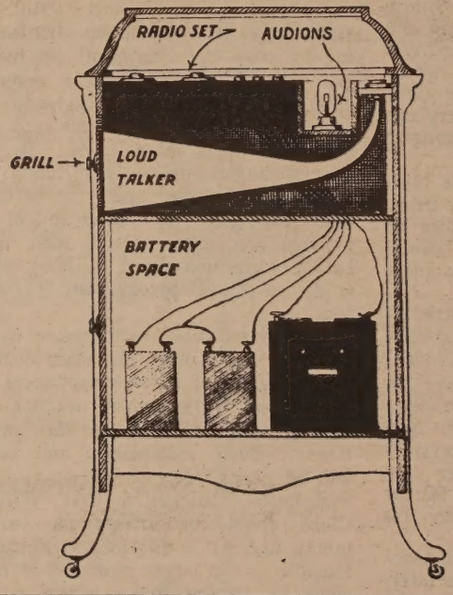
The simplest form of radio unit is the one shown above. It is a small cabinet upon which the radio set itself is placed, and in which the batteries, renewal parts and other accessories are kept. A cabinet of this type may take any one of a number of forms of construction so long as the cabinet is large enough to contain the necessary apparatus. Such a cabinet may often be found around the household.



A slightly more elaborate cabinet is one constructed in the design shown above. The loudspeaker is built in the top container together with the operating cabinet. The bottom portion is given over, as in the previous case, to housing the batteries and other necessary accessories to the operation of the set. With this type of construction all parts of the set may be reached with comparative ease in case of repairs.



A still more elaborate case for a well confirmed "Radio Fan" is the one shown here. The cabinet takes the form of a writing desk and contains several refinements, which the arrangements previously shown do not contain. Note the small light above the operating cabinet, special drawer provided for head phones and bits of apparatus, and the ample space provided for a storage battery charger in the bottom compartment.



A radio set housed in a cabinet very similar to the well-known phonograph type is shown above. Some companies have commercially adopted this form and have met with no little success in selling them, tending to prove that this form of construction, aside from having exceptional acoustic properties, proves very handy to the operator. The construction is simple, and the necessary details of arrangement are shown in the sketch.

National Amateur Wireless Association
This is to certify that
Ray Dio Enthusiast
having furnished satisfactory credentials and having shown that he is a student of Radio Communication is hereby accepted in fellowship and full membership in THE NATIONAL AMATEUR WIRELESS ASSOCIATION of America. He agrees hereby as shown by his signature, to promote the interests of experimental radio work and at all times to observe the Laws of Radio Communication of the United States.
Signed by:
Member
Approved:
G. Marconi
President
Executed by
Acting President
Membership expires
Managing Secretary.

The steel engraved membership issued to each member. It is printed in green, gray and black, with halftone shadow background, and carries the signatures and official seal of the Association

letters

Dear Jim,

As a result of an ad in THE HORN SPEAKER and the gracious help of Mr. Harry Goldman, I now have parts 2 and 3 of "How to Build a Transatlantic Wireless Receiving Set" as found in EVERYDAY MECHANICS May, June and ? of 1916. I still need part I, however. Thank you very much.

Yours,
Ken Ladd
5240 44th Ave. S.
Mpls., MN 55417

Dear Readers,

I would like to take this opportunity to wish all my friends that I have made and met through THE HORN SPEAKER a very Happy New Year. And also want to wish THE HORN SPEAKER success in 1989.

Sincerely,
Russell Schoen
E. 7340 Nietzhe Rd.
Clintonville, WI
54929

The above 1915 certificate was the promotion of the Marconi Wireless Telegraph Company. The N.A.W.A. was said to have been headed by Guglielmo Marconi but that he would act only in an advisory capacity. Anyway an original of the above certificate would really enhance a radio collection.

SCHEMATICS 1920-1960
RADIO/TV/HAM/MISC.

YOUR SATISFACTION OR
YOUR $3.50 REFUNDED.

ALTON H. BOUMAN
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January 22th

flea market

AD SPACE:
Full page $50.00

Half page $25.00
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inch $0.60

CLASSIFIED ADS FREE
UP TO 100 WORDS. Additional words are 5 cents each.

FOR SALE — SCHEMATICS, BOOKS, ETC.

****

FOR SALE OR TRADE— POPULAR ELECTRONICS magazines 1956-79; QST 1950-60 in binders (except 55-59). Will break sets by year. Mike Grimes, K5MLG, 3805 Appomattox, Plano, TX 75023.

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SET OF BACK ISSUES OF THE HORN SPEAKER, HERBERT F. DEGARMO, 203 3RD STREET, EARLY, IA 50535.

****

1938 CAPITOL RADIO ENGINEERING COURSE COMPLETE IN 8 BINDERS PLUS 19 ISSUES OF CREI NEWS BULLETINS. 1943-50 ALL MINT CONDITION $225 U.S. VIA UPS PREPAID, JACK,(604) 522-2418, 6758 BRYANT ST., BURNABY, B.C. V5E 1S8 CANADA

****

MAGAZINES— RADIO NEWS 1948 TO 1954 $2.50 EA. RADIO CRAFT 1939 TO 1944 $2.50 EA. RADIO CRAFT 1945 TO 1948 $2.50 EA. RADIO ELECTRONICS 1948 TO 1955 $2.00 EA. ALL PLUS SHIPPING. MIN ORDER'S $7.50. KRANTZ, 100 OSAGE AVE., SOMERDALE, NJ 08083.

****

FOR SALE OR TRADE= 1938 NATIONAL RADIO INSTITUTE RADIO COURSE: APPROXIMATELY 80 BOOKLETS IN TWO NRI BINDERS. 1938 NRI TEST ANSWERS IN NRI GREEN BINDER. 1938 RADIOTRICIANS SERVICE MANUAL IN BLACK BINDER. 1952 NRI RADIO COURSE IN NRI BINDER. ALL IN GOOD CONDITION. WISH TO TRADE AS PART PAYMENT ON ANY MANUFACTURED CRYSTAL RADIO, OR PARTS TO CRYSTAL RADIOS OR TWO CALIBRATED KNOBS 2 1/2" DIAMETER OR PHILCO ONE OR TWO TUBE 1938 SLANT FRONT KIT RADIO OR ANY SIMILAR ITEMS. RICHARD R. SPRATLEY, 2112 McLAIN STREET, CHESAPEAKE, VA 23324. PHONE (804) 545-2402.

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THIS SERVICE MANUAL supplement contains a list of electrical values, resistors and condenser, coils and transformers in all Atwater Kent radios 1924-1933 inclusive $3.50 P.P. 24 pages. ****** THIS BULLETIN contains the complete list of Philco black bakelite "by pass" condensers, new universal types, discontinued types with replacements and condensers with internal resistors $1.50 P.P. —— Lee Williams, 2015B 228TH S.E. Bothell, WA 98021.

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FOR SALE— RIDERS MANUALS, ABRIDGED (VOL. 1-5) AND VOL. 6 THROUGH 16 $275.00. VOL. 9, 10, 14 $20.00 EACH. ANTIQUE RADIO SERVICE, O. H. McDONALD, 2535 WEDGLEA #124, DALLAS, TX 75211.

****

SCHEMATIC $1.25 each, give make and model number. New manuals of old tubes, substitution guide, characteristic, VT numbers and pin out guide, Tubes, books, and parts. Send SASE to Housel, 1816 S.W. 12, lincoln, NE 68522.

****

ELECTRONIC ORGAN SCHEMATICS AND MANUALS. SASE FOR PRICE QUOTES. MANY MAKES AND MODELS. ALTON H. BOWMAN, 4172 EAST AVENUE, RD 2, CANANDAIGUA, NY 14424.

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FOR SALE — GENERAL

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FOR SALE: 100's OF RADIOS, speakers, magazines. Send $1.50 (stamps OK) for current list to Jim Clark Enterprises, Dept. THS, 1292 Starboard, Okemos, MI 48864.

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HEATHKIT HW-100, SHIP COD. M. G. Clute, K5DXV, Route 1 Box 1, Jewett, TX 75846.

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FOR SALE: I HAVE SOLD MY RADIOS. All who have requested my list will get a revised list. I have a few battery radios and speakers. I have many amateur radios, tubes and magazines; also teletype equipment. military surplus; some nice test equipment. Amateur handbooks and magazines. I have to sell before March. Russ Olmsted, K4UJZ, 608 W. Thompson Lane, Murfreesboro, TN 37129. (615) 893-5344.

****

TUBES, SCHEMATICS, LITERATURE, ETC. for early electric radios. SASE for free price list. Sam Faust, Changewater, NJ 07831-0094.

****

2 PHILCO CATH. 70 — 1 PHILCO TOMBSTONE, 37-89 — 1 PHILCO TOMBSTONE 60-B- — 1 AK MODEL 55 RED COVER AND SPEAKER. RUSSELL OR IRMA SCHOEN, E7340 NIETZKE ROAD, CLINTONVILLE, WI 54929. (715) 823-6744.

****

THESE ITEMS WILL MAKE FINE ~~XMAS~~ GIFTS. MARCONE - RCA - STOCK CERTIFICATE $32.00 — ACE RADIO OLD TIMER WITH HIS TEA KETTLE RADIOS, AND CATS IN COLOR SIZE 8" X 10" $22.00. WITH MAT $24.00. UNSOLD STOCK TUBE SETS WITH 029 CARTON FROM EARLY 1960 MADE IN U.S.A. GRANCO MODEL 604 FM. ADMIRAL Y 3443 AM. GE AM SET $27.50 EACH. HARD COVER SAGA OF THE VACUUM TUBE BOOK.FIRST EDITION 1977 $27.50. ALL PLUS POSTAGE OR U.P.S. — KRANTZ, 100 OSAGE AVE., SOMERDALE, NJ 08083.

****

MAJESTIC, model 25, ser.# 2B036224 Grigsby Grunow Co., radio on tall legs —— Western Auto Supply Company, model 929-48380, 50-60 cycle, 83 watts- console model- needs veneer work, lights up but doesn't play. has plug in for TV. G.E. tubes in chassis #001048. make offer. S. T. Mellas, Rt. 1 Box 119F, McNeal, AZ 85617.

****

LARGE MAHOGANY WALL TYPE TELEPHONE withshelf, magneto and bells. 30" high X 10" wide. Two carbon button mikes.. one double button and one single WESTERN ELECTRIC. Some blue Amberol cylinder records. Aeriola Senior radio, some plastics. R. Matson, RFD#1, Box 2943, Kennebunk, ME 04043. (207) 985-3751.

****

PHILCO CATHEDRAL MODEL 70, EXCELLENT, 01A TUBES, NEUTROWOUND BATTERY SET WITH SPEAKER, 2 OLD TELEPHONES. RUSSELL SCHOEN, E 7340 NIETZHE ROAD, CLINTONVILLE, WI 54929. (715) 823-6744.

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RME 69 EARLY RECEIVER. rack mount, generally good, weak on 160 meter band $95; loose coupler, unusual replica $35; crystal grinding outfit $15; very early RCA/GE/Acme transmitter power supply transformer and choke (for Vu-202 & such) iron case $45; Polaroids $1.00@. All plus UPS. Paul C. Crum, W9LC, 6272 N. Cicero Avenue, Chicago, IL 60646. (312) 282-3033.

****

FOR SALE: ANTIQUE (1924 VINTAGE) ATWATER KENT BREADBOARD MODEL 10A IN ALMOST MINT CONDITION, WITH FIVE GOOD UX201A'S INCLUDING MODEL M HORN SPEAKER. WARRANTY AND INSPECTION TAGS ARE OK. $700.00 PLUS SHIPPING AND PACKING. PREFER NOT TO SHIP. WILL CONSIDER SELLING SET OR SPEAKER SEPARATELY. LEO GIBBS, W8BHT, 701 BROOKFIELD ROAD, KETTERING OH 45429. (513) 299-3965.

****

RIDERS #6 TO #14 $18.00 EACH. HOWARD SAMS IN BINDERS ASSD. YEARS $15.00 EACH. HAWKINS ELECT. GUIDES SET OF 10 BOOKS $30.00. HAVE SOME ASSD. TUBE TESTERS, SIGNAL GEN. FOR SALE 3" TO 5" SCOPES. 1— CARRY A STOCK OF NEW AND USED REPAIR PARTS, TUBES, VOL. CONTROLS, IF COILS, SPEAKER KNOBS, DIAL BULBS, DRIVE BELTS, BALLEST TUBES, 1,000'S OF UNLISTED RADIO PARTS. WRITE WANTS AND SASE. SHIPPING EXTRA ON ALL ITEMS, RADIO SALES AND SERVICE SINCE 1930. KRANTZ, 100 OSAGE AVENUE, SOMERDALE, NJ 08083

****

STEWART WARNER model 305, Stewart Warner speaker, American Bosch model 360, Silvertone model 1386, Clarion Jr. 320 superhetrodyne, small mirror tone deluxe," ivory colored radio with red knobs, case only for a Kennedy cathedral. Send for new list. Clifforf Schoen, 549 Fulton St., Seymour, WI 54165. Phone (414) 833-2429.

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FOR SALE: RADIOLA MODEL II 225.00, 11 pr. Newcomb headsets 2.00 pr., Junker Magnavox TRF model D 15.00, 1930's Zenith junker tombstone 10.00, model 3970 Philco battery tombstone 15.00, UZ-1325 horn only 10.00, table model 1950's Admiral electric radio with phonograph 10.00, model 10728A Philco Transitone 10.00, late 20's American Bosch electric set with 8 tubes 50.00, 1950's Studebaker car radio 20.00, 1940's Zenith push button electric radio (plays) 25.00, U.P.S. extra, Larry Chambers, 5026 Suter Drive, Nashville, TN 37211, AC (615) 833-2448.

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FREE: Send 2-stamp LSASE for just released Flyer, NO. 188c to: Olde Tyme Radio Company, 2445 Lyttonsville Road, Silver Spring, MD 20910.

****

MANY THOUSANDS OF OLD TUBES. LARGE 80, 81, 82, 83 BOXES OF WESTERN ELECTRICS RECEIVING AND TRANSMITTING TUBES, PEANUT TUBES, METAL TUBES, E. H. SCOTT TUBES, BOXES OF LOCTALS AND OCTALS. IV TUBES. ALSO FIRST EDITION RIDERS SUBSTITUTION GUIDE BOOK. ONLY SELLING ALL U PICK UP. TUNGAR BULBS. TO: BASIL ABBOTT, #4 BUNKER HILL, RICHARDSON, TX 75080.

****

FOR SALE: to receive America's best list of radios, tvs, mags, etc.. send $1.50 for current list to: Jim Clark Enterprises, Dept.,HS, 1292 Starboard, Okemos, MI 48864.

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SEND LARGE SASE for list of radios., Donald Juleen, 6252 Ledge Road, Sturgeon Bay, WI 54235.

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FOR SALE — PHILCO

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PHILCO 95TH ANNIVERSARY limited edition cathedral radio, AM/FM transistor chassis, look a like to Philco model 90 - 1932- collector's item, only $89.91 plus $5.00 shipping. Maurer TV, 29 South 4th Street, Lebanon, PA 17042.

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FOR SALE — SCOTT

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SCOTT ALLWAVE 12 IN NAPIER CONSOLE CABINET, GOOD UNRESTORED CONDITION, CABINET NEEDS MINOR VENEER REPAIR, TUBE COVERS AND COIL CANS NEED RECHROMED. TRADE FOR BEST OFFER OF 1940'S JUKEBOXES AND/OR PRE 1941 SLOT MACHINES. ALVIN HECKARD, RD1, BOX 88, LEWISTOWN, PA 17044.

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FOR SALE — TUBES, PARTS, ETC.

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FOR SALE — 500 NEW GE IN BOXES— TUBES- ALSO HAVE TRANSMITTING TUBE LIST. SEND SASE FOR 6 PAGE LIST. RUSS OLMSTED, K4UJZ, 608 W. THOMPSON LANE, MURFREESBORO, TN 37129 (615) 893-5344.

****

FOR SALE— NEW AND USED TUBES, electrolytic capacitors, cone speakers, send SASE for lists. C. Elmer Nelson, 11 S. Church Street, Princeton, IL 61356.

****

30 DAY SALE: New tubes in original cartons $2.00 each. 0Z4, 1AD2, 1BC2, 1R5, 2AV2, 3HQ5, 3Q4, 3S4, 4BZ6, 4BZ7, 5AM8, 5U8, 6AH4, 6AL5, 6AM4, 6AM8, 6AQ6, 6AS8, 6AW8, 6AY3, 6BC7, 6BF6, 6BJ8, 6BK5, 6BW8, 6CM7, 6CN7, 6CS7, 6CU5, 6CU8, 6CY7, 6DB5, 6DK6, 6EM5, 6FS5, 6GC5, 6HZ6, 6KZ8, 6U8, 6W6, 7AD7, 8AW8, 8CX8, 10EG7, 12A4, 12AB5, 12AL5, 12AT6, 12AT7, 12AV5, 12AV6, 12AZ7, 12C5/12CU5, 12D4, 12DB5, 12DT5, 12KS, 13DE7, 14E6, 14E7, 19AU4, 19J6, 35B5, 35W4, 35Z3, 50EH5, 5963, 5964. Add $2.40 shipping (Wisconsinites add 5%) Don Diers, 4276-S4 North 50th Street, Milwaukee, WI 53216-1313. Send $1.00 (refundable) for lists of tubes and stuff.

****

FOR SALE: GRILL CLOTH. New, custom-made material in diamond pattern. Good match for 1930's radios. $6.00 for 10" X 12" piece, postpaid. Send SASE for sample. Michael Katz, 200 East 30th Street, Apt. 8E, New york, NY 10016. (212) 725-0736.

****

TUBES ONE-V 6.00, 6V5/6G5-6E5 12.00,6L6M 17.00, 6L6 GC 10.00, 6 and 12 V 3 and 4 prong vibrators 12.50 all ppd. H. f. Brammell, 204 E. Maple, Americus, KS 66835.

****

FOR SALE: NEW IN ORIGINAL BOX, 215-A WESTINGHOUSE $30.00. ONE BRASSBASE UV-201-A TUBE EX. CONDITION POST PAID. $20.00 NO TIP USED. CLEON BOOTHE, BOX 235, COHOCTON, NY 14826.

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Beyond Rider!

"SUPER-HETS OF THE TWENTIES"

The number of super-het circuits offered the home-constructor in the late Twenties was awesome, and there has never been offered the hobby a sole-source of relevant data. Now, in response to a long series of requests D.H.MOORE has created another important contribution to the hobby - "Super-Hets of the Twenties". As with his other vintage radio writings, this massive Monograph combines scarce technical information and broad human interest. Among its contents are:

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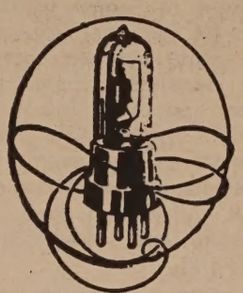

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A rather large (200 pages) and lavishly illustrated Monograph is now ready for your further enjoyment of the hobby. A copy may be ordered from either of the addresses listed below, whichever is most convenient for you. The price is $25,ppd.

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TELEVISIONS

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RCA CT-100 FIRST PRODUCTION COLOR TV set — beautifully restored cabinet and meticulously restored electronics with a great 15" color picture like 34 years ago (1954). An opportunity is now to own a unique electronic invention of the century. SASE and $1.00 for photo. Bill Russell, 3236 Laurel Canyon, Santa Barbara, CA 93105. (805) 682-8115. Accepting offers through March 1988 (min. bid $2,500 or $3,500 sold outright.)

****

RCA TV Model 8PT7010 in red metal case in working condition. Included second set same model for parts. Make offer. John Schellkopf, 1344 Goucher Street, Pacific Palisades, CA 90272.

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FOR SALE — ZENITH

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THE CABINET IS IN MINT CONDITION and the radio plays. It is a Zenith 12 tube superhetrodyne with a tuning range 540-18400 kyc., chassis 1204-A. Marshall T. Bond, 8718 Linkfair lane, Houston, TX 77025. (713) 668-0029.

****

FOR SALE: 1940'S VINTAGE ZENITH CONSOLE radio and phonograph. Cabinet is in excellent condition. $250.00 — Call (815) 838-5398. 5 p.m. to 10 p.m. c.s.t. Dick Stauss, Rt. 1 Box 399, Lockport, IL 60441.

****

WANTED — BRUNSWICK

ONE PUSH BUTTON for a Brunswick radio. Chassis M-27-6 serial # 1237. It is brown bakelite, 7/16" in. diameter, 1" long. George C. Edwards, Route 3, Box 956, Henderson, NC 27536.

WANTED — CRYSTAL SETS

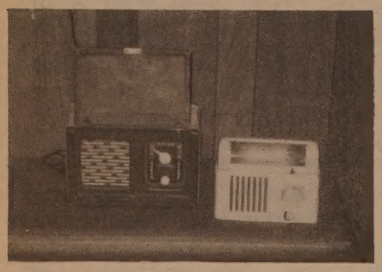
HOMEBREW CRYSTAL SET. Dial type mounted on nice wooden cabinet. Vernon Kostohryz, 600 Lakeside 3A, Brownsville, TX 78520. (512) 541-5692.

WANTED — EDISON

WANTED FOR EDISON STANDARD phono— model B. 1.) mainspring 2.) decals-trademark and "Edison, 3.) cabinet lid 4.) A. K. breadboard in excellent condition. Carl Hickey, 27404 N. Highway 1, Fort Bragg, CA 95437. (707) 964-0505.

WANTED — GENERAL

WANTED: COLLINS TRANSMITTERS 4A, 32A, 32B, 45A, 150B and 300B and any other pre war II amateur radio equipment. Top prices paid by Collector Parker, W1YG, 87 Cove Road, Lyme, CT 06371. (203) 434-7783 or (813) 262-2568.



1942 MOTOROLA AM PORTABLE RADIO, (model #65L11 or 65L12) and 1948 Mitchell "bed lamp radio" (model # 1250 or 1251) EARLY 1920's Holton alto saxophone, having at least a 5 inch diameter bell. Absolutely no smaller. Serial # must be 5 digit and start with number one or two! Write to: Saxophone, P. O. Box 773, Wausau, WI 54402.

WANTED: 1946-1948 RCA Victor "Globe-Trotter" portable radios in excellent working condition. Models 66BX & 8BX6. ALSO WANTED: 1920's Holton alto saxophone, having a 5 digit serial #, starting with # 1 or 2. Bell diameter must be at least 5" across. Absolutely no smaller. Send photo & complete description to: Saxophone, P.O. Box 773, Wausau, WI 54401.

SET OF 7 BAND CHANGING PUSHBUTTONS for Zenith Trans-Oceanic (slide rule type dial), manuals or copies for: Waterman 517A pocketscope, Electro-logic V1 (spinning drum type) Digital voltmeter. Peter J. Ben, 222 Parkview Terr., Lincroft, NJ 07738.

GOOD DIALS FOR PHILCO 37-62 (p/n 27-5287), Emerson 565 AM/FM, & Sonora RCU-208; Good cabinet GE A-65, Rider Vols. 20, 21, 23; Richard Brown, 117 Meisel Avenue, Springfield, NJ 07081. (201) 467-9628.

BATTERY TYPE "RADIOLA" that fits into the Brunswick model BR100 radio phonograph unit. Also, any info or literature on same. Dick Roznovsky, Box 480, Richfield, OH 44286.

WANTED. Oscilloscopes of the 30's. Not working ok if complete, inside & out. Also want 1" to 3" CRT's for early scopes. Have many radios, TVs, parts & literature to swap or will buy. John Kendall, P.O. Box 436, Fallston, MD, 21047.

OLD FIDDLES/ VIOLINS, BANJOS OR MANDOLINS, ETC. ANY CONDITION IF REASONABLE PRICE. THE OLDER THE BETTER. ALSO DO REPAIRS ON FIDDLES/ VIOLINS. CALL OR WRITE JAMES BARNES, 7812 TAZEWELL PIKE, CORRYTON, TN 37721.

OLD BROADCAST OPERATOR IN ARIZONA INTERESTED IN OLD RADIO MEMORABILIA; PAPERS, OLD TUBES, NOVELTIES, SMALL RADIOS, AND COMPONENTS OF THE TWENTIES AND THIRTIES. HAVE RADIOLA 25 WITH LOOP, 6440 ZENITH WAVEMAGNET, PHILCO 32V FARM RADIO, R.C.A. NAVY SHIP RECEIVER, EICO 950 RC BRIDGE, GERMAN RADIOS, WILCOX GAY TAPE AND RECORD PLAYER, BC 348 RECEIVER, SYLVANIA METAL TUBE CABINET, SYLVANIA JACKET, TUBES, CHOKES, METERS, TRANSMITTER COLLINS 32V3, EICO 720, W.E. INTERCOM AND A FEW W.E. TUBES, GONSET COMMUNICATOR IV, GRAY AUDOGRAPH, STENTYPE MACHINE AND QUACK MEDICAL MACHINES. LIKE TO HEAR FROM COLLECTORS... WAYNE FERNYHOUGH, 1632 W. ROVEY AVENUE, PHOENIX, AZ 85015.

GLASS TUNING DIAL FOR MOTOROLA 5T, ZENITH TOMBSTONE, (AKA WALTON'S RADIO), PHILCO 16B, 90, 70 AND ANY OTHER CATHEDRALS OR TOMBSTONES. MIKE BUKOWSKI, 926 CROWNRIDGE DRIVE, COLORADO SPRINGS, CO 80904

WANTED. BROWN BAKELITE KNOB and 199 tube socket from Steinite model 990 seris radios. Ed Clerkin, 1305 San Marcos Ct., San Luis Obispo, CA 93401. (805) 544-3088.

WANTED: A WIRE RECORDER for playing 3 3/4" spools of recording wire. Used navy equipment. Russell Starkey, 855 Eisenhower Avenue, Jasper, IN 47546. Phone (812) 482-1016.

SIDE TUNING KNOB FOR BELMONT 6D111, manual and schematic for measurements model 80 and Heathkit LG-1 signal generators, RIDERS vols. 16-23, and SAMS 1-700. Looking for a book by the title of "Case Histories of Receiver Troubles and their Remedies," published by Rinehart Books in addition to a hard-cover copy of Tyne's "The Saga of the Vacuum Tube." Am also interested in contacting other collectors in Columbus, Ohio area. Brett Gundlach, 276 E. COMO AVE., COLUMBUS, OHIO 43202, HOME 614) 267-0346, WORK (614) 888-9502.

RADIOLA 28 with 104 speaker, Radiola 25, Radiola 20, Norden Hauck Superhet, Leutz Superhet, Pilot Super Wasp, Pilot parts, Crosley parts, Atwater Kent parts and AK breadboard parts, RCA UZ-1320 horn, Radiola RS, Zenith Super VII or VIII, crystal sets, Burns horn, Emmett A. Smith, 2714 Alden Road, Baltimore, MD 21234.

WANTED— CABINETS FOR RADIOLA X, AND FEDERAL 59, DISPLAY SODION TUBE, UNUSUAL HAND KEYS, INFORMATION ON HALLECK-WATSON COMPANY OF PORTLAND, OREGON. PAT STEWART, W7GVC, 1404 RUTH AVE., WALLA WALLA, WA 99362.

WANTED: ZENITH 11 OR 12 BAND "TRANS-OCEANIC" TRANSISTOR, TOSHIBA "GLOBE-TROTTER," SONY "ORBITER" RECEIVERS OR PARTS, ALSO KLH-21 FM ONLY RADIO. BILL WADE, 657 14TH AVENUE, PROSPECT PARK, PA 19076.

WANTED: ENTIRE WORKS for Capehart 500K, also Edison C-1, C-2, Balmoral and Alva, Victor 10-51A, Tom Grattelo, 2818 Central, Alameda, CA 94501.

PEERLESS MODEL 19AR-60 9" DYNAMIC speaker with cabinet in good working condition. H-P model 410C VTVM working. RCA Victor R-35 radio in excellent working condition. Simpson model 1699 milliohmmeter in working condition. Radiola 20 chassis with good audios. Audio transformer for RCA Victor R15 or RCA Radiola 48. Radio Broadcast magazines for 1922 and 1928. Early Canadian Radio magazines such as Canadian Wireless, Radio, etc. Radio News for July, August and October 1919. October 1921, January 1922, August and September 1924. Top prices for good condition magazines. R. A. McNeill, P. O. Box 472, Yorkton, Sask., Canada S3N 2W4 (306) 783-6121.

WANTED: DECANTER BOTTLES, ice bucket, shot and drinking glasses for model 9008-B Porto-Baradio made by Stewart Warner. Clarence MCGinnis, 1507 N. Glenn Street, Morristown, TN 37814.

WANTED: OWNERS OF EARLY ELECTRICAL magazines, MODERN ELECTRICS, ELECTRICIAN & MECHANIC, etc. I will pay for good photocopies of articles on spark gaps, high frequency Tesla & Oudin coil projects, etc. Need information for forthcoming bibliography. Write first to TCBA, RD3 Box 181, Glens Falls, NY 12801.

WANTED: WWII MILITARY Iconoscope TV camera or tube alone. OK if converted to amateur use. Canadian Marconiphone III regen., IV neutragenaflex, VI, VIIA, VIII, IX, XI. Canadian Westinghouse model W55, W55A, W60A, W57. Hammarlund Trans-Oceanic "Two", De Luxe, Hawk. Kresge Z4 Commander, Karas Short Wave Receiver. D'Arcy Brownrigg, P.O. Box 292, Chelsea, Quebec, J0X 1N0, Canada.

WANTED: A. K. MODEL 55, need everything to mate with gear on tuning condenser. Could also use but not so critical speaker or cone for above. Floor cabinet model, need ivory knob, prefer function for FADA mdl. 790. Will buy junk A.K. if it has at least the tuning parts. C. England, 98 Montague, So. Zanesville, OH 43701.

C-4 TUBE. for Columbia radio model C-80A. SPRING AND PLATE for A.K. speaker model M. Russ Schoen, E 7340 Nietkze Road, Clintonville, WI 54929. (715) 823-6744.

I BUY BATTERY RADIOS and horns from the 20's, if you have one to sell, send me a card with name, model and price. Rick Parrish, 1260 marilyn Drive, Cape Gir., MO 63701.

WANTED: ZENITH OCEANIC 7000, TOSHIBA- GLOBAL, GRUNDIG SATELLITE OR SONY "ORBITER" BATTERY MULTIBAND SET, WADE, 657 14TH AVENUE, PROSPECT PARK, PA 19076.

WANTED: ONE VERY NICE RADIOLA 100 A LOUD SPEAKER, PLEASE WRITE: PAUL O'PATIK, 316 RUTHERFORD AVENUE, FRANKLIN, NJ 07416.

DO YOU HAVE THAT CLASSICAL 78 ALBUM that has a damaged or missing record? I have an "album singles for sale" listing that I will send to anyone for a 25 cent long self-addressed stamped envelope. Anton Johannes, R.D. #3 Box 253, Pine Bush, NY 12566.

WANTED. I BUY RADIO TV collections. Please send description and price desired. John Kendall, P. O. Box 436, Fallston, MD 21047.

WANTED— SCHEMATIC, ETC. ON BLUE RIBBON AND REMINGTON 5 TUBE RADIOS, OR OTHER RADIOS LIKE THE ABOVE. WANT TO GET THEM WORKING WITH ORIGINAL PARTS. W. G. WEAMER, 390 E. FOSTER ROAD, SANTA MARIA, CA 93455.

WANTED "TENSOR ANALYSIS OF NETWORKS" by Kron; Briggs and Stratton crystal set; accessories for "smokerette" radio. Forrest Baker, 1558 W. Garfield, Davenport, IA 52804.

WANTED — HAMMARLUND

HAMMARLUND CONDENSERS, MC-100, MC50, MCD-35FX, NORMAN CRANE, KF7AS, P.O. BOX 12564, TUCSON, AZ 85732. 749-9140.

WANTED — HEADPHONES

NONWORKING OR WORKING HEADPHONES: Advance, Ajax, Allied, Aristocrat, BASCO, Bel-Canto, Benwood-Linze, Berkey, Berstan, Big Three, Blue Streak, Brandes (early model that has "Superior" stamped on wide nickeled band), Branston, Brown, Churry, Clarion, Davis (bakelite), DTW, DECO, Dymac, Eastern, Eisman, Electro Importing, Essex, Ericson, Everytone, Excello, Federal 52-W, Friedlander- Koppler, Gold Stripe, Gold Tone, Gundlach- Manhatten, Hart- Hegeman, Hartford, Harvey-Wells, Haynes- Griffin, Huball, International, Interocean, IWB, Jolley, Keystone, Kilbourne Clark, Kodel, Lark, Litewate, Magnus, Metro, MacKay, Majestic, Miller, More Tone, Murdock Special, Music Master, National, Navy Ordance Supply, Ohio, Orator, Penn Headset, Perfectone, Ports, Rasco, Radiocraft, Radiotive, Randolph, Red Head, Royal, Seco, Sears, Spartan, Smelzer, Splitdorf, Sraco, Steinmetz, Sunlight, TBM, Teleradio, Tempest, Trego, Victor, Welbilt, White Beauty, Wireless Specialty, Ben Wolfe. .... Vernon Kostohryz, 600 Lakeside 3A, Brownsville, TX 78520. (512) 541-5692.

WANTED — LEUTZ

WANTED FOR LEUTZ MODEL "C" super-het.: 2 Weston No. 301 voltmeter 0 - 10 volts DC. 2 Weston no. 301 ammeter 0-5 amps. DC. 4 General Radio type 231 A audio transformer. 6 special Leutz I.F. transformers. 1 special E.I.S. (Leutz) oscillator coil. 1 special E.I.S. (Leutz) R.F. coupler coil. John A. Rawlins, Jr., 1920 Stephenson Drive, Mesquite, TX 75149. (214) 285-2313.

WANTED — LITERATURE

SAM'S FOLDERS No's. - 55-5, 60-1, 61-16, 80-4, 81-3, 82-1 and 104-2, FRED EMERSON, 627 ILLINOIS AVENUE, ELGIN, IL 60120

INSTRUCTION MANUAL FOR EICO MODEL 950 A RC BRIDGE CONDENSER CHECKER. H. F. BRAMMELL, 24 E. MAPLE, AMERICUS, KS 66835.

REWARD: $25 plus your asking price for the Tesla Supplement from May 1912 MODERN ELECTRICS or $25 for its loan (you get it back), references available or $15 for a good photocopy. TCBA, RR6, Box 181, Glens Falls, NY 12801

WANTED OPERATING MANUAL for Precision Tube and Multi-tester #954 Zerox copy OK. Will pay. John G. McDade, #214, 204 E. Joppa Road, Towson, MD 21204.

WANTED: SCHEMATIC TEL-SWEEP GENERATOR. MODEL TSW-50-1948 VISION LABS, JOHN G. MC DADE, 204 E. JOPPA ROAD, #214, TOWSON. MD 21204.

EVERY DAY MECHANICS, VOL. I, NO. 4, MAY 1916 OR A COPY OF "HOW TO BUILD A TRANS- ATLANTIC WIRELESS RECEIVING SET. K. A. LADD, 5240 44TH AVE. S., MPLS., MN 55417. (612) 722-6786.

LAFAYETTE RADIO CATALOGS - 1960 THRU 1968, PLEASE STATE CONDITION AND PRICE. MR. MICHAEL S. SABODISH, SR., 11 - A MATAWAN AVENUE, CLIFFWOOD, NEW JERSEY 07721.

WANTED: OPERATING MANUAL and tube data sheets for Jackson Dynamic tube tester model 636. Zerox copy O.K. Frank Hoffert, 19605 Chardon Road, Cleveland, OH 44117.

WANTED - INFORMATION AND SCHEMATIC for Blaupunkt Sultan 3D radio. Model number unknown, 5 tube AM/FM/ SW. Write Ray Carifio, N4LTS, 6014 SW 33rd Street, Miami, FL 33155

WANTED: LIBRARY BOUND volumes of QST, CQ, 73 PRE 1960. ALSO GLOBE SCOUT (WRL), MIKE GRIMES, K5MLG, 3805 APPOMATTOX CIRCLE, PLANO, TX 75023.

WANTED: SCHEMATIC AND INFO on Eico ST 70 amplifier. Gordon Wilson, 11108 - 50 Avenue, Edmonton, Alberta, Canada T6H 0H9.

WANTED: INSTRUCTIONS FOR PACO MODEL 25 IN-CIRCUIT CAPACITOR TESTER RCA WR-50A SIGNAL GENERATOR CRYSTALINER (CRYSTAL MODULES) GENERATOR, GLENN HARTMAN, 5545 DEEP HOLLOW, FAYETTEVILLE, NC 28311.

WANTED — PARTS, TUBES, ETC.

FIXED DETECTOR GRID RESISTANCE FOR ATWATER KENT MODEL 32 AK PART # 8190, ALSO GRID LEAK RESISTOR, AK PART #8190. ALSO FOUND IN MODELS 20c- 30- 33- 35. C. Hoffman, 824 Gordon Street, Allentown, PA 18102. Phone (215) 434-2536.

REPLACEMENT CONE MATERIAL FOR STROMBERG- CARLSON 601-TRF COMPANION CONE SPEAKER. LAWRENCE DE ROSE, 12 WILLS AVENUE, R.D.#1, STANHOPE, NJ 07874.

MACHINES SCREWS TO HOLD PANEL TO CABINET, RADIOLA III AND IIIA, I NEED TWO DOZEN. ERNEST HECKLER, 1314 N. SPARKMAN, HARTSELLE, AL 35640.

WANTED — BATTERY RADIO CHASSIS AND/OR ANY INFORMATION ON BRUNSWICK RADIOLA PHONOGRAPH, MODEL BR100, PATENT 1923 — DICK ROZNOVSKY, BOX 480, RICHFIELD, OH 44286.

WANTED: CABINET & AUDIO TRANSFORMERS FOR GREBE CR9, ARTHUR HARRISON, 501 ARBOR DRIVE, COLUMBIA, MO 65201. (314) 474-8729.

DIAL TUNING KNOB AND RESET LOCK SCREW FOR A WARDS 62501 TABLE MODEL RADIO, RIDER 10 - 22, H. F. BRAMMELL, 24 E. MAPLE, AMERICUS, KS 66835.

ZENITH DETECTOR COIL NO. S-8436 USED IN CH, 10A1, 10A2, 10B1, 10B2. ATWATER KENT MODEL 60 A.F. TRANSFORMER ASSEMBLY. L49B BALLAST TUBE. 45 RPM SPINDLE FOR B5R C129 CHANGER EV/GAME 436. CABINET FOR PILOT TV 37. 3KP4 CRT. ELECTRONICS MEASUREMENT CORPORATION. MODEL 502 SIGNAL GENERATOR, ASSEMBLY MANUAL OR SCHEMATIC. AUDIO INPUT XFMRS FOR SINGLE PLATE TO P-P GRIDS. ANY JUNKBOX PARTS, LITERATURE. ANY EARLY TWO AND THREE PIECE CAR RADIOS, UNITED MOTORS, B.O.P., ETC. ANY OTHER FACTORY CAR RADIOS FROM 30'S - 40'S. ANY SIGNAL SEEKING TYPE CAR RADIOS, MUST HAVE KNOBS. CAR RADIO KNOBS. — ALVIN HECKARD, RD1, BOX 83, LEWISTOWN, PA 17044.

EARLY OR UNUSUAL TUBES, tube cans, cartons also early light bulbs pre 1900. Please describe with prices wanted to: Bruce Harbeck, 13408 Westwood Lane, Omaha, NE 68144. (402) 333-9013.

HALLDORSON 3 to 1 audio transformer, copper casing. hard rubber panel 10 x 11 x 1/4. Gordon Wilson, 11108 - 50 Avenue, Edmonton, Alberta, Canada, T6H 0H9.

DETECTOR and AUDIO PORTION of GREBE CR2. Also need cabinet for same. NEED FRONT PANEL FOR SCOTT Phantom DELUXE. Larry Steeno, 2728 42nd Street, Two Rivers, WI 54221. (414) 794-7320.

MARCONIPHONE VIII cabinet, also Marconiphone VI chassis, or complete radios cash, or generous trade. Gordon Wilson, 11108 - 50 Avenue, Edmonton, Alberta, Canada, T6H 0H9.

WANTED: EMPTY CABINET for a Philco model 20 cathedral radio. I already have the radio and speaker. Must be in good condition. Joe Beach, 6515 Sunset, Garden City, MI 48135.

WANTED— CABINET AND PARTS FOR A FEDERAL 61. Mike Kibler, 300 Speiter #39, Danville, IL 61832. (217) 267-3703.

WANTED: ONE TUNING DIAL and one coil tap knob for a Crosley model XJ. Jack Emery, Box #84, 5546 Union Street, Lexington, MI 48450.

TUBES: EARLY UV-217, type CA pliotron, DeForest DV-1 and DV-6, adapter for DeForest type T audion to fit candelbra socket. Parts: rheostat assembly and knob for Tuska 224 rcvr.; case w/hardware for Radiola balanced amplifier. B. T. Wooters, W5KSO, 8303 E. Mansfield Avenue, Denver, CO 80237, (303) 770-5314.

WANTED — PHILCO

PHILCO MODEL 90B, working or not. Original speaker from Philco model 20— must be in good shape. Thomas Abell, 1022 S. Edison Ave., South Bend, IN 46619. Phone (219) 234-8405.

WANTED — PLASTICS

WANTED: CATALIN RADIOS. All makes: FADA, OSWALD, EMERSON, MOTOROLA, etc. Top prices paid. R. Wayne Oliver, 355 Highwood Avenue, Leonia, NJ 07605. (201) 944-0777.

WANTED — SCOTT

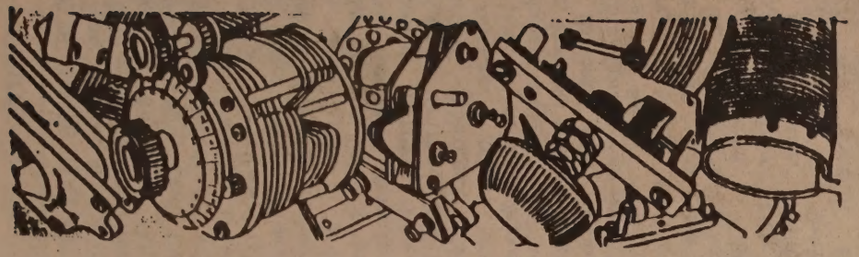
WANTED: EH SCOTT, SCOTT transformer or World's Record radios, sometimes copper or chrome plated. Especially looking for Symphony, AC9, Shield Grid 10B, World's Record Super 9, Shield Grid 9B, AW13, AW19, AW27, pointer dial Philharmonic, any Scott in these cabinets: Secretaire, Napier, Warwick, Ravinia Grande, Laureate Grande. Also want original literature, especially issues of THE SCOTT NEWS. Contact me first if you have anything SCOTT to sell. Jim Clark, 1292 Starboard, Okemos, MI 48864. (517) 349-2249.

WANTED — SONY

WANTED: OLD SONY radios. Jay Lewin, 400 east 54th Street, New York, NY 10022. (212) 935-5656.

WANTED — ZENITH

ZENITH TRANSISTOR Trans-Oceanic 11 or 12 band radio- parts or complete. Have Rider TV manuals 2 thru 23 for offer. Wade, 657 14th Ave., Prospect Park, PA 19076.



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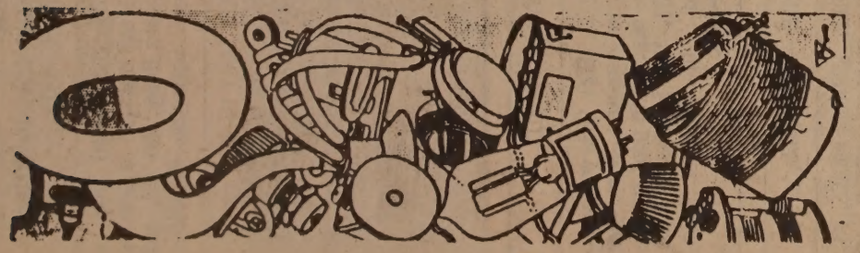

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